

AP Statistics  
Notes Ch. 1

Introduction

**DEFINITION: Statistics**

**DEFINITION: Individuals and variables**

**DEFINITION: Categorical variable and quantitative variable**

**DEFINITION: Discrete variable, Continuous variable**

**DEFINITION: Distribution**

**How to Analyze Data**

## 1.1 Analyzing Categorical Data

**DEFINITION: Frequency table**

**DEFINITION: Relative frequency table**

**DEFINITION: Pie chart**

**DEFINITION: Bar graph**

## How to Make a Bar Graph

### DEFINITION: Two-way table

### DEFINITION: Marginal relative frequency

**DEFINITION: Joint relative frequency**

**DEFINITION: Conditional relative frequency**

**DEFINITION: Side-by-side bar graph**

**DEFINITION: Segmented bar graph**

**DEFINITION: Mosaic plot**

**DEFINITION: Association**

## 1.2 Displaying Quantitative Data with Graphs

### **DEFINITION: Dotplot**

### **How to Make a Dotplot**

**DEFINITION:** Symmetric and skewed distributions

**How to Describe the Distribution of a Quantitative Variable**

**DEFINITION:** Unimodal



**DEFINITION: Bimodal**

**DEFINITION: Multimodal**

**DEFINITION: Stemplot**

**DEFINITION: Splitting stems**

**DEFINITION:** Back-to-back stemplot

**How to Make a Stemplot**

**DEFINITION:** Histogram

## How to Make a Histogram (with and without technology)

## Using Histograms Wisely

### 1.3 Describing Quantitative Data with Numbers

**DEFINITION:** *The mean  $\bar{x}$*

**DEFINITION:** **Statistic and Parameter**

**DEFINITION:** **Resistant measure**

**DEFINITION:** **The median**

## Effect of Skewness and Outliers on the Measures of Center

**DEFINITION:** Range

**DEFINITION:** The standard deviation  $s_x$  and variance  $s_x^2$

## How to Calculate the Sample Standard Deviation $s_x$

## Properties of standard deviation

### DEFINITION: Quartiles

**DEFINITION:** First quartile  $Q_1$

**DEFINITION:** Third quartile  $Q_3$

**DEFINITION:** Interquartile range ( $IQR$ )

**The  $1.5 \times IQR$  rule for outliers**



**DEFINITION: The five-number summary**

**DEFINITION: Boxplot**

**How to Make a Boxplot**

## Choosing Measures of Center and Spread